Mississippi Department of Education

Recommendation of a Growth Component for the 2009 Statewide Accountability System

September 23, 2009

A total of eight growth models were developed and presented to the Commission on School Accreditation for evaluation. In evaluating the eight growth models, three overarching criteria were used to evaluate the models:

- Did the model make robust predictions in MCT2 scale score change?
- Did the model use simple predictors to help ensure that the model is clear and easier to understand?
- Did the model produce meaningful growth composites that will be easier to interpret?

Table A represents a matrix of the eight models and their ability to satisfy each of the criteria.

From Table A, it is easy to see that Model 001 is the only pilot model that satisfies all three criteria, so it is recommended as the model to be used in the statewide accountability system for 2009.

Table A

Model ID	Robust Predictions	Simple Predictors	Meaningful Growth Composite
Model 001	**Yes**	**Yes**	**Yes**
Model 002	No	No	Yes
Model 003	Yes	No	Yes
Model 004	No	Yes	Yes
Model 005	Yes	Yes	No
Model 006	No	No	No
Model 007	Yes	No	No
Model 008	No	Yes	No

The Commission on School Accreditation also submitted several other recommendations for modifications to the 2009 accountability system such as making it clear that districts who reach the highest level should be designated as a "Star District" rather than a "Star School" and removing the third column from the accountability matrix. It is the Commission's belief that the third column was repetitious of the second column and that the third column be removed from the accountability matrix.

The Commission also recommends removing from the growth calculations any high schools that are not applicable to the growth model for the 2009 school year. Since growth for high

schools will be calculated using the MCT2, and the MCT2 was first given during the 2007-2008 school year, any schools containing only grades 10-12 will not have any students from that first administration to use in making growth predictions for this year. Any schools with grades K-3 will have the QDI for the school reported, but will not have an accountability label assigned. Any school whose highest grade is lower than grade 4 will show "Not Assigned" in place of an accountability label.

Table B shows the number and percent of schools falling into each of the QDI ranges and whether the school met or did not meet growth using Model 001, or whether the school was not eligible for measuring growth.

Table B

Total N and %			N and % in Each QDI Range									
			0-100		100-132		133-165		166-199		200-300	
Met	402	50.4%	6	1%	55	7%	158	20%	144	18%	39	5%
Not Met	396	49.6%	55	7%	156	20%	136	17%	45	6%	4	<1%
Total	798		61	8%	211	26%	294	37%	189	24%	43	5%

Table C shows the number and percent of districts falling into each of the QDI ranges and whether the district met or did not meet growth using Model 001, or whether the district was not eligible for measuring growth.

Table C

Total N and %			N and % in Each QDI Range									
			0-100		100-132		133-165		166-199		200-300	
Met	66	43.4%	0	0%	10	7%	27	18%	27	18%	2	1%
Not Met	85	55.9%	8	5%	45	30%	27	18%	5	3%	0	<1%
Total	151		8	5%	55	36%	54	36%	32	21%	2	1%

Continued "implementation mode" development of the growth component will be conducted. In addition to annual revision of the initial prediction equations, the development process will include:

For 2010:

- Equations for predicting 2010 Grade 10 Algebra I scale score from 2008 Grade 8 MCT2
- Equations for predicting 2010 Grade 10 Biology I scale score from 2008 Grade 8 MCT2
- Equations for predicting 2010 Grade 10 English II (Multiple Choice) scale score from 2008 Grade 8 MCT2

For 2011:

- Equations for predicting 2011 U.S. History (from 1877) scale score from 2008 Grade 8 MCT

The results reported in Tables B and C above are reproduced in the QDI by Growth Status matrices in Figures 1 and 2 below for schools and districts respectively.

Figure 1
Pilot Growth Model 001 (School Level)

MCT2 SS Predicted by MCT2 Language SS and Math SS
SATP SS Predicted by MCT2 Language SS and Math SS

QDI Range (2009 Values)	Growth Status		High School Completion Variables
	Not Met 396 (49.6%)	Met 402 (50.4%)	
200 – 300	High Performing	Star School* 31 (3.9)	HSCI ≥ 230 or Grad Rate ≥ 80%
43 (5.4%)	4 (0.5%)	High Performing 8 (1.0%)	HSCI < 230 or Grad Rate < 80%
166 – 199	Successful	High Performing* 131 (16.4%)	HSCI ≥ 200 or Grad Rate ≥ 75%
189 (23.7%)	45 (5.6%)	Successful 13 (1.6%)	HSCI < 200 or Grad Rate < 75%
133 – 165	Academic Watch	Successful	
294 (36.8%)	136 (17.0%)	158 (19.8%)	
100 – 132	At Risk of Failing	Academic Watch	
211 (26.4%)	156 (19.6%)	55 (6.9%)	
0 – 99	Failing	Low Performing	
61 (7.6%)	55 (6.9%)	6 (0.8%)	

Notes: "Met" indicates a growth composite greater than or equal to 0.
"Not Met" indicates a growth composite less than 0.
*Schools without a graduating class are assigned an accountability status based on the QDI and growth status only and therefore receive the highest possible status for the appropriate QDI range as indicated.

Figure 2
Pilot Growth Model 001 (District Level)

MCT2 SS Predicted by MCT2 Language SS and Math SS
SATP SS Predicted by MCT2 Language SS and Math SS

QDI Range (2009 Values)	Growth Status		High School Completion Variables
	Not Met 85 (56.3%)	Met 66 (43.7%)	
200 – 300	High Performing	Star District* 2 (1.3)	HSCI ≥ 230 or Grad Rate ≥ 80%
2 (1.3%)	0 (0.0%)	High Performing 0 (0.0%)	HSCI < 230 or Grad Rate < 80%
166 – 199	Successful	High Performing* 20 (13.3%)	HSCI ≥ 200 or Grad Rate ≥ 75%
32 (21.2%)	5 (3.3%)	Successful 7 (4.6%)	HSCI < 200 or Grad Rate < 75%
133 – 165	Academic Watch	Successful	
54 (35.8%)	27 (17.9%)	27 (17.9%)	
100 – 132	At Risk of Failing	Academic Watch	
55 (36.4%)	45 (29.8%)	10 (6.6%)	
0 – 99	Failing	Low Performing	
8 (5.3%)	8 (5.3%)	0 (0.0%)	

Notes: "Met" indicates a growth composite greater than or equal to 0.
"Not Met" indicates a growth composite less than 0.
*Districts without a graduating class are assigned an accountability status based on the QDI and growth status only and therefore receive the highest possible status for the appropriate QDI range as indicated.